



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,002	06/24/2003	Mikel Lorente	60,680-0536	1636

7590 04/07/2005

DYKEMA GOSSETT PLLC  
SUITE 300  
39577 WOODWARD  
BLOOMFIELD HILLS, MI 48304

EXAMINER
----------

ENGLISH, PETER C

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/603,002	<b>Applicant(s)</b> LORENTE, MIKEL	
	<b>Examiner</b> Peter C. English	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20030624</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:  
42, mentioned in paragraph 15, at line 2.
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The specification is objected to because:  
In paragraph 11, at line 2, "28 layer" should be "layer 28".  
In paragraph 11, at line 4, "30 layer" should be "layer 30".  
In paragraph 14, at line 4, "layer" should be inserted after "shim".  
In paragraph 15, at lines 3 and 6, "segment" should be inserted after "axle".  
In paragraph 16, at line 9, "21" should be "22".  
In paragraph 16, at lines 15-16, "28 layer" should be "layer 28".  
In paragraph 16, at line 18, "30 layer" should be "layer 30".  
In paragraph 16, at line 21, "30 layers" should be "layers 28 and 30".  
In paragraph 17, at line 3, "24" should be "26".  
In paragraph 18, at line 3, "24" should be "26".  
Appropriate correction is required.

Art Unit: 3616

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification fails to describe the bearing 44 as having “a first portion fixedly coupled to the axle segment, and a second portion fixedly coupled to the steering knuckle assembly” (claims 11 and 14, at lines 4-6).

#### ***Claim Objections***

5. Claims 9 and 19 are objected to because:

In claim 9, at line 4, “and” should be inserted before the second occurrence of “nitrile”.

In claim 19, at line 5, “and” should be inserted before “nitrile”.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

6. Claims 2, 4, 5, 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, at line 2, “the receiving portion” is indefinite because more than one receiving portion has been previously recited. The examiner suggests: at line 2, insert “corresponding” before “receiving”.

Claims 11 and 14 fail to accurately set forth the invention because they define the bearing 44 as having “a first portion fixedly coupled to the axle segment, and a second portion fixedly coupled to the steering knuckle assembly” (claims 11 and 14, at lines 4-6). Since the bearing 44 facilitates pivotal movement of the steering knuckle relative to the axle segment, the bearing cannot be “fixedly” coupled to these elements.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3616

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 15, 16, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (US 1,681,870). Miller discloses a steer-axle assembly comprising: a steering knuckle 4 having an integral kingpin with upper and lower interface segments 3, 5; an axle segment A including upper and lower receiving portions C, D having bores 1, 6 that receive the interface segments 3, 5; and a compressible shim 10-12 that fills a gap between the steering knuckle 4 and the receiving portion C of the axle segment A. The shim includes a rubber layer 10 located between two metal layers 11, 12 (see page 1, lines 59-63). With respect to claim 19, Miller's rubber layer is considered to be "sponge" rubber as is broadly claimed.

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser (US 4,043,567) in view of Miller (US 1,681,870). Kaiser discloses a steer-axle assembly comprising: an axle segment 10; a steering knuckle 20 having upper and lower receiving portions 22, 24 with bores 26, 26; bushings 28, 28 received in the bores 26, 26; a kingpin 14 secured to the axle segment 10 and having upper and lower interface segments 16, 16 received in the bushings 28, 28; a multi-layer shim 37 that fills a gap between the steering knuckle 20 and the axle segment 10; an end seal 56; an inner seal 40; and a thrust bearing 35.

Kaiser lacks a compressible shim having a rubber layer located between two metal layers. Miller teaches a compressible shim 10-12 that fills a gap between a steering knuckle 4 and an axle segment A. The shim includes a rubber layer 10 located between two metal layers 11, 12

Art Unit: 3616

(see page 1, lines 59-63). From this teaching of Miller, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kaiser by providing a compressible shim having a rubber layer located between two metal layers because such a shim structure will prevent rattle, compensate for wear and absorb shocks (see Miller, page 1, lines 74-85). With respect to claim 7, the examiner takes Official notice that steel is a well-known material in the art. Therefore, it would have been obvious to form the metal layers of steel because of steel's high strength and low cost. With respect to claim 9, Miller's rubber layer is considered to be "sponge" rubber as is broadly claimed.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 1,681,870). Miller lacks metal layers made of steel. The examiner takes Official notice that steel is a well-known material in the art. Therefore, it would have been obvious to form the metal layers of steel because of steel's high strength and low cost.

### *Conclusion*

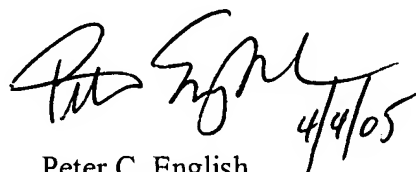
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jurosek et al. teaches a multi-layer thrust bearing for a steer-axle assembly. Link teaches a steer-axle assembly with an inner seal. Moskovitz and Hinks teach shims having a rubber layer between metal layers.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 571-272-6671. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Peter C. English', followed by the date '4/4/05' written in a similar cursive style.

Peter C. English  
Primary Examiner  
Art Unit 3616

pe  
4 April 2005